MARSHALL STAR

Serving the Marshall Space Flight Center Community **Nov. 22, 2001**

Endeavour launch to complete record year in space

NASA news release

The Flight Readiness Review for STS-108 held Nov. 15 at the Kennedy Space Center in Florida gave a go to proceed toward launch of Space Shuttle Endeavour Nov. 29. The mission will take a fourth crew to the International Space Station, finishing a record-breaking year of missions that completed the first phase of the station's orbital assembly.

"In the past 12 months, we've completed some of the most challenging space flights in history, setting records for the number of space walks that have been conducted and the amount of hardware we've assembled in orbit," Space Shuttle Program Manager Ron Dittemore said. "In the next year those challenges will continue with missions just as complex to service the Hubble Space Telescope and expand the Station. The team continues to excel safely and successfully. Endeavour is ready to fly."

Dom Gorie (Capt., USN) will command Endeavour, Mark Kelly (Lt. Cdr., USN) will serve as pilot, and mission specialists will be Linda Godwin and Dan Tani. Traveling to the Station aboard Endeavour to begin a five-month stay will be Expedition Four Commander Yury Onufrienko and flight engineers Carl Walz and Dan Bursch. Coming home on Endeavour after almost four months on the Station will be Expedition Three Commander Frank Culbertson, Pilot Vladimir Dezhurov and Flight Engineer Mikhail Tyurin.

Endeavour will carry an Italian-built logistics module named Raffaello to the station loaded with supplies and experiments. During the Shuttle's stay at the orbiting complex, one space walk is planned by Godwin and Tani to add insulation to mechanisms that rotate the station's solar arrays.

Endeavour is planned to land Dec. 10 at the Kennedy Space Center.

Marshall's role on STS-108, see pages 6-7

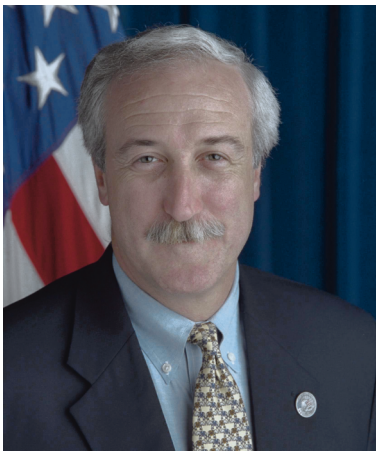
Inside the Star

White House nominates Sean O'Keefe as new NASA Administrator

President George W. Bush on Nov. 15 announced his intention to nominate Sean O'Keefe, deputy director of the Office of Management and Budget (OMB), as NASA's new Administrator.

With the President's nomination and anticipated confirmation, O'Keefe will succeed Administrator Daniel S. Goldin, who resigned after nearly 10 years as the agency's chief.

"I would like to offer my congratulations to Sean as he begins the nomination process to become NASA's next Administrator. I look forward to assisting in the transition of my leadership of America's space program," Goldin said. "I feel blessed to have had the unique opportunity to serve the people of this nation in an area so tied to the hopes and dreams of all



O'Keefe

*See **O'Keefe** on page 3*

November is Native American Heritage Month

Code Talkers helped deliver American victory in WW II

from the Redstone Arsenal
Equal Employment Opportunity Office

In 1942, 29 Navajo Marines completed boot camp at the Marine Recruit Depot in San Diego, Calif. They were then sent to Camp Elliott — modern day Marine Air Corps Station Miramar — where they developed a code based on the Navajo language that was used for secure military communication in the Pacific Arena of World War II.

Eventually around 400 Navajo men were trained in the code's use and served as Code Talkers, relaying messages through the airwaves with incredible speed and accuracy. At Iwo Jima alone, the Code Talkers transmitted more than 800 error-free messages in a 48-hour period. The Japanese were never able to decipher the code, and it is largely credited as a major factor in helping the United States to victory.

Because of its success and its possible use in future combat, the Code Talkers were sworn to secrecy about their involvement in the war and the code was not declassified until 1968. As a result, the Code Talkers who developed the code were awarded with the Congressional Gold Medal, the highest honor Congress can bestow on a citizen of the United States. The rest of the Code Talkers who served in the war will be awarded the Congressional Silver Medal this fall, an award that has not been given in more than 75 years.

MGM Pictures presents their heroic story in the movie "Windtalkers." The story of the Code Talkers is an indispensable part of our U.S. history. It is a story of heroism and incredible courage, and it is time that this story was told.

Cherokee ancestry at the heart of facilitator's interest in cultural diversity

by Debra Valine

Each quarter, Marshall Center civil servants are given the opportunity to attend cultural diversity training. The last class was held Nov. 7 and 8 at the Bevill Center on the University of Alabama-Huntsville campus.

Debie Grissom, an industrial property management specialist in Marshall's Property Management Group, was one of five facilitators of the course.

Grissom

"Our classes range in attendance from 20-30 civil servants," Grissom said. "The goal is to reinforce the need for people to understand all the cultures here at Marshall. We don't just talk about different ethnic groups, we address other cultures such as engineers, management support assistants, scientists and other professionals. We also talk about sub-groups.

"For instance, within the engineering profession, you have mechanical, electrical and aerospace engineers, any of them could be male or female, Asian-Pacific American, Hispanic American, African American or Native American," Grissom said. "We talk about all those cultures.

"The class is not what a lot of people think it is," Grissom said. "It is not a bashing session. People from all groups attend the classes knowing that anything said within the class is confidential and this confidentiality has not been broken in the five years that the class has been offered."

Grissom said the one message she wants employees who attend the cultural diversity class to walk away with is that when celebrations for the various groups are held, that people should attend. "It's important to get to know the people we work with and learn more about the customs of these cultures. If we do not interact with each other, there are gaps in understanding when we have to work with others that are different than we are."

To attend an upcoming cultural diversity class, register via AdminSTAR. For more information, call Laura Groce at 544-9154.

Grissom became interested in Marshall's cultural diversity program in 1995 partly because her great-great-grandmother, Trevesa, was full Cherokee.

"She walked the Trail of Tears," Grissom said. "My great-great-grandfather George Plunk was white, and they were already married with seven children, but because my great-great-grandmother was full Cherokee, she was relocated to Oklahoma. She made the trip, and once she got there, my great-great-grandfather had to go to Oklahoma to bring her back home.

"I don't know a lot about her," said Grissom, who is doing some genealogical research. "I didn't know about my Native American ancestry until about six years ago. We had gone to the Ledbetter Cemetery, located in Shiloh, Tennessee, just west of Savannah, Tennessee. My father's sister, Nell Byrd, took us to the place where Trevesa was buried at the back of the cemetery. Back then, if an Indian was married to a white person, they could be buried in the same cemetery, but in the back of the cemetery, away from their family."

Grissom plans to locate as much information as possible on her great-great-grandmother, and learn more about which Cherokee nation Trevesa was from and the rituals that were known to that particular group. "I hope to locate more of her family," Grissom said.

The writer, employed by ASRI, is the Marshall Star editor.

Marshall Center co-sponsors High School Senior Day at Alabama A&M

The Marshall Center helped high school seniors sample education topics and career choices during the fifth annual High School Senior Day at Alabama A&M University in Huntsville Saturday. The annual student recruitment effort, co-sponsored by the Marshall Center, attracted 3,100 high school seniors from across the country for campus tours and a football game.

Marshall Center volunteers provided tours and made presentations about potential careers with NASA. Marshall's Starship 2040 — a traveling exhibit about what commercial spaceflight might be like 40 years from now — was on site. George Reese, NASA's associate administrator for Equal Opportunity Programs in Washington, D.C., tossed the coin to start the football game between the Alabama A&M Bulldogs and the University of Arkansas at Pine Bluff Golden Lions. The game was a buyout by the Marshall Center.

Photo by Emmett Given, NASA/Marshall Space Flight Center

George Reese, center, NASA associate administrator for Equal Opportunity Programs, is escorted to the field for the coin toss to start the football game between Alabama A&M and the University of Arkansas at Pine Bluff.

O'Keefe

Continued from page 1

Americans. I hope that Sean will feel equally blessed when he assumes his new job. The President has nominated a man of intelligence, energy and deep integrity. I wish Sean well."

Prior to his appointment at OMB, O'Keefe was the Louis A. Bantle Professor of Business and Government Policy, an endowed chair, at the Syracuse University Maxwell School of Citizenship and Public Affairs in New York. He also served as the director of National Security Studies, a partnership of Syracuse University and Johns Hopkins University in Baltimore, Md., for delivery of executive education programs for senior military and civilian Department of Defense managers.

Appointed to these positions in 1996, he was previously professor of business administration and assistant to the senior vice president for research and dean of the graduate school at the Pennsylvania State University in University Park, Pa.

In 1992, he was appointed as the secretary of the Navy by President George H.W. Bush, and in 1989, served as comptroller and chief financial officer of the Department of Defense for then Defense Secretary Dick Cheney.

Before joining the Defense Department, he served on the United States Senate Committee on Appropriations staff for eight years, and was staff director of the Defense Appropriations Subcommittee.

O'Keefe's public service began in 1978 after he was selected as a presidential management intern.

He is a fellow of the National Academy of Public Administration and has served as chair of an academy panel on investigative practices. O'Keefe was a visiting scholar at the Wolfson College of the University of Cambridge in England, a member of the Naval Postgraduate School's civil-military relations seminar team for emerging democracies and has conducted seminars for the Strategic Studies Group at Oxford University.

He served on the national security panel to devise the 1988 Republican platform and was a member of the 1985 Kennedy School of Government program for national security executives at Harvard University in Cambridge, Mass.

In 1993, President Bush and Secretary Cheney presented him the Distinguished Public Service Award. He was also the recipient of the Department of the Navy's Public Service Award in December 2000. In 1999, he was a faculty recipient of the Syracuse University Chancellor's Award for Public Service.

O'Keefe is the author of several journal articles, contributing author of "Keeping the Edge: Managing Defense for the Future," released in October 2000, and in 1998, co-authored "The Defense Industry in the Post-Cold War Era: Corporate Strategies and Public Policy Perspectives." He is also a member of the Bohemian Club of San Francisco.

"The President intends to nominate Sean to what I feel is the best job in the world, leading a team made up of the best people I've had the privilege to know," Goldin said. "There is no more dedicated group of people serving any agency in the federal government. "I am sure NASA's creative and diverse workforce will give Sean the same outstanding support it's given me these many years."

O'Keefe earned his bachelor's degree in 1977 from Loyola University in New Orleans, La., and a graduate degree in 1978 from The Maxwell School.

NASA modifies Space Flight Operations Contract

NASA news release

NASA recently negotiated two modifications to the Space Flight Operations Contract with United Space Alliance, adjusting costs, resolving open issues related to work done last year and providing for a variety of tasks planned during 2002. Together, the modifications have a total value of $189 million.

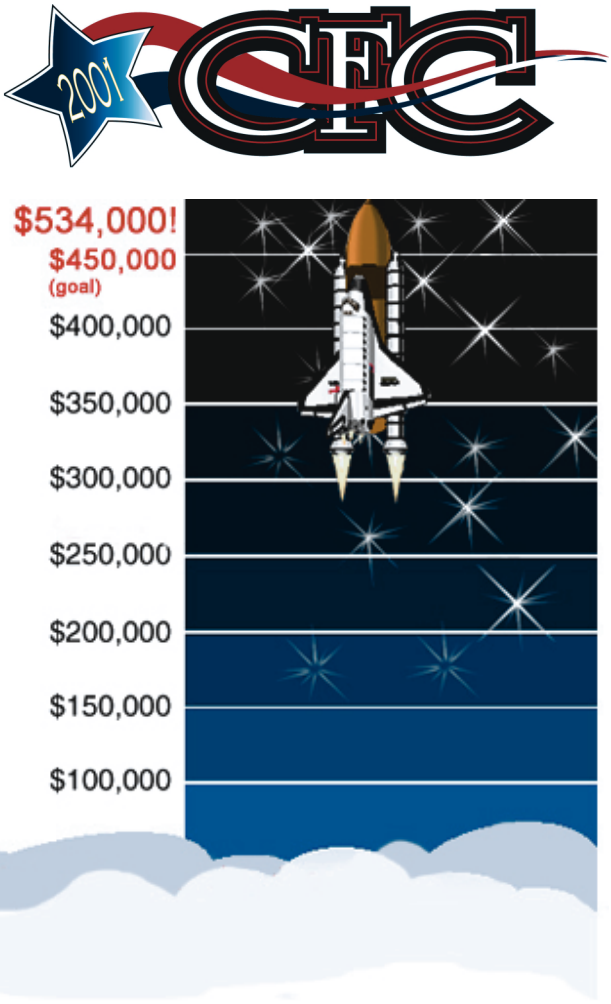
The first modification bundles several different credits and costs incurred in the Space Flight Operations Contract during fiscal year 2001 and results in a net increase to the contract value of $95 million. The largest task involved and the majority of incurred costs are related to work on Space Shuttle Columbia as part of a maintenance period that was completed earlier this year.

The second modification enhances the fiscal year 2002 Program Provisioning Task List, providing sustaining engineering for the Space Shuttle Program, adding $94 million to the contract value.

The program-provisioning tasks involve work on the Shuttle orbiters, ground operations, program integration, program reimbursables, flight operations and solid rocket boosters.

The Space Flight Operations Contract allows program provisioning to be assessed on an annual basis.

Work under the two modifications will be performed in Houston; Huntington Beach, Calif.; Palmdale, Calif.; Huntsville, Ala.; and at the Kennedy Space Center, Fla.



Pledges total more than $534,000

Jacobs' subsidiary approved as DoD mentor

Jacobs news release

The Jacobs Engineering Group Inc.'s Marshall Center Group recently received the 2001 NASA Mentor-Protégé Goldin-Stokes award.

As a prime contractor at the Marshall Center, Jacobs is mentoring Qualis Corporation in various business practices. The Goldin-Stokes award is the most prestigious award conferred to an active participant in the NASA's Mentor-Protégé program. It recognizes program participants who have been in the program at least one year and exemplify extraordinary advancements.

Jacobs Engineering Group Inc. also recently announced that a subsidiary company has been approved to participate as a mentor in the Department of Defense (DoD) Pilot Mentor-Protégé Program. Jacobs, the parent company, has been an approved mentor in the program since 1993, and has been the recipient of three Nunn-Perry awards.

The award was established in 1995 to highlight outstanding mentor-protégé teams formed under the auspices of the DoD Pilot Mentor-Protégé program. Through this award, DoD seeks to recognize outstanding program performance by representing awards to mentor-protégé teams that excel in the areas of commitment, technical assistance and economic development.

A unique feature of the Jacobs mentoring effort is that protégé firms are selected and sponsored in their local communities, with local Jacobs' personnel. This gives the protégé easy access to their sponsor and open lines of communication. Jacobs mentoring efforts have included conducting on-site mentoring programs, bringing staff members (experts from around the country) to the protégé's facilities for training and consultations, and providing interactive feedback.

Through participation in the DoD Pilot Mentor-Protégé program, Jacobs will help small disadvantaged businesses, women-owned small businesses, and qualified organizations that employ the severely disabled to develop technical and business capabilities.

Marshall Quality Policy merges with Marshall Values

As a result of the ISO 9001:2000 revision, a change has been made to the Marshall Quality Policy. The 2000 revision requires emphasis on Customer Satisfaction and Continual Improvement. The old policy did not address both of these issues; therefore, the Marshall Center received an observation in the pre-assessment.

The new Marshall Quality Policy is as follows: "MSFC policy is to provide quality products and services to our customers through the Marshall values: people, customers, excellence, teamwork and innovation."

The policy is the same as the old with the addition of four words in the body "through the Marshall values:" Then the five values are listed.

After review of the Marshall values, the auditor felt the Marshall values was a natural fit to answering the requirements of the new revision.

ISO registration audit set Nov. 28 and 29

National Quality Assurance (NQA) will be at the Marshall Center Nov. 28 and 29 for the registration audit to ISO 9001:2000 and full scope.

Some questions you may be asked include:

What is Marshall's quality policy? Marshall's new quality policy is: MSFC Policy is to provide quality products and services to our customers through the Marshall values: people, customers, excellence, teamwork and innovation.

Who is Marshall's ISO 9000 Management Representative? Axel Roth, Marshall's associate director.

Have you received your New ISO 9000 Badge Card? If not, contact your ISO 9000 organization representative.

To prepare for the upcoming ISO registration audit, visit the ISO 9000 Website, available through "Inside Marshall," review the new ISO Badge Card Checklist, and visit the Marshall Management System (MMS) training modules.

Obituary

Gilmore, Robert N., 71, of Oneonta, Ala., died Nov. 18. He retired from Marshall in 1990 where he worked as an aerospace engineer in experimental facilities development. He is survived by his wife, Minnie-May Owen Gilmore.

IFM outlines future procedures for purchase card transactions

by Doreen Medzi
Glenn Research Center

What single program in NASA includes the participation of thousands of civil servants and results in tens of thousands of purchases yearly? If you guessed the Purchase Card Program, you would be right. Purchase cardholders number in excess of 3,000 Agencywide, and include both procurement and non-procurement employees. Purchase cardholders made more than 175,000 purchases last year that totaled in excess of $77.5 million dollars.

Today, each NASA Center uses a different method to record purchase card transactions. These methods vary from completely manual paper systems to nearly fully automated computer systems. While the basic process for use of the government purchase card will remain unchanged, the method used to record transactions will change significantly next year with the implementation of the Integrated Financial Management (IFM) Program's Core Financial module.

The Marshall Center is serving as the Pilot Center for the Core Financial Project. When the Core Financial software is implemented here in the summer of 2002, purchase card users will be provided with an automated end-to-end purchase card process. At that time, purchase cardholders at Marshall, and later on, at the remaining NASA Centers, will record all the pertinent information related to purchases in the new system. When goods or services are received, that information will also be recorded in the system. Purchase cardholders will receive bankcard transaction data electronically each month for reconciliation.

Reconciliations will be completed on line, and afterwards the reconciled transactions will automatically be forwarded to the appropriate approving official for final approval. The approving official also will use the software to approve the transactions. Finally, the system will automatically record obligation and cost data and create invoices for payment.

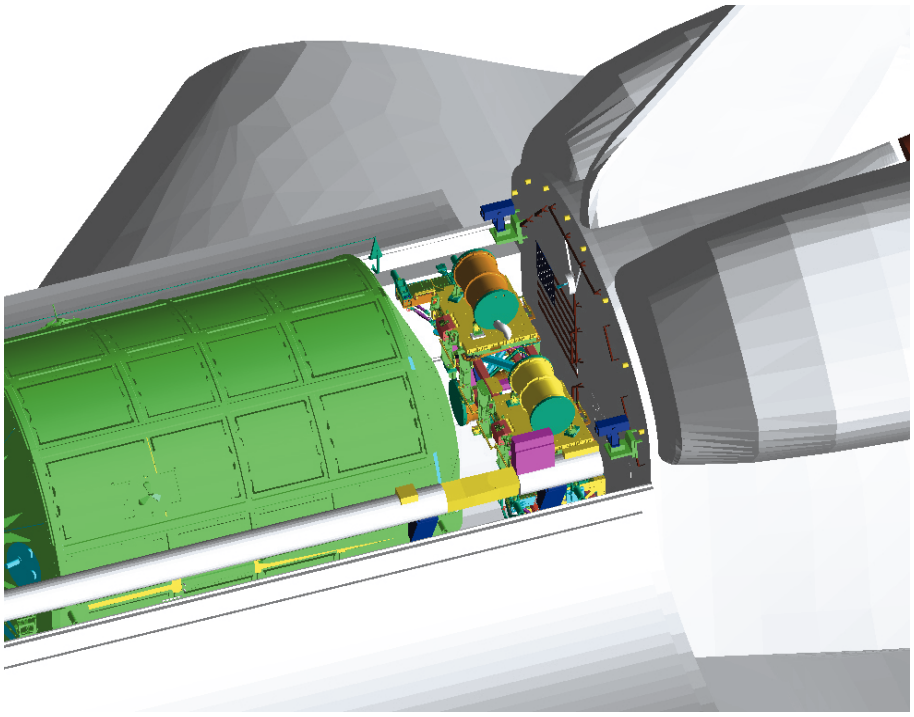
When the software is implemented at all 10 NASA Centers, NASA will have a single, standardized purchase card process in use throughout the Agency. NASA purchase cardholders will be able to complete their purchase card duties more efficiently and effectively. This effort represents a big change for all purchase card users, but with training and a willingness to learn a new way of doing business, Marshall's purchase card users can help to make this endeavor a success for the Agency.

Science steps up on International Space Station with new load of experiments, fresh crew to operate them

by Tracy McMahan

A new suite of experiments will be delivered to the International Space Station by Space Shuttle Endeavour later this month — kicking off Expedition Four and broadening scientific research onboard the orbiting space laboratory.

Endeavour will carry the Raffaello logistics module — a "moving van" bearing new experiment equipment for the Space Station's Destiny laboratory. Raffaello was built by the Italian Space Agency and managed by the Flight Projects Directorate at the Marshall Center. It is making its second trip to the Station on the STS-108 Shuttle Flight. Raffaello successfully delivered many experiments to the Station last April on Space Shuttle Flight STS-100, ISS Flight 6A.



"Since our first payload reached the Space Station in September 2000, we have launched more than 4.6 tons (4,200 kilograms) of research hardware and experiments, and returned more than a thousand pounds (500 kilograms) of hardware, samples and other data to Earth," said John Uri, the Expedition Four science mission manager. Uri works at NASA's Johnson Space Center in Houston, Texas, but his team members are stationed in NASA's Payload Operations Center at the Marshall Center — the Space Station command post for science operations.

"The laboratory has five research racks, and we have accomplished the goals of 28 research payloads, supporting 41 investigations from government, industry and academia in the United States, as well as Japan, Canada, Germany and Italy."

In addition to the experiments being delivered to the Station, Endeavour will carry four Shuttle-based science experiments on the Lightweight Multi-Purpose Experiment Support Structure Carrier — a platform that Marshall Center engineers designed to fit in the rear of the Shuttle behind Raffaello. STS-108 is the first flight of this new carrier.

"The combination of a talented design team and the close coordination among people at five NASA centers made it possible to get this new carrier ready for its maiden flight in less than a year," said Susan Spencer, a systems engineer in Marshall's Flight Projects Directorate. "This innovative modification of existing hardware will make it possible to fly additional, low-cost science payloads in the Shuttle, or deliver replacement parts quickly to the Space Station."

During Expedition Four, the suite of research instruments will grow from 18 to 26 U.S. payloads — seven of them new to the Space Station science program and several with multiple experiments.

"We are going to accomplish more science on Expedition Four than we attempted on any of the previous three expeditions," said Uri.

New experiments during Expedition Four are expected to lead to insights in bone disorder treatments, petroleum production, safe drug delivery capsules, antibiotic production, cancer cell formation, plant growth, embryo development, biotechnology and long-term effects of space flight on humans.

Research equipment for Expedition Four will be transported both on the STS-108 flight this month and on the STS-110 mission when Space Shuttle Atlantis visits the Station in March.

Twelve experiments, taking advantage of the low gravity created as the Station orbits Earth, are sponsored by the Marshall Center — NASA's Lead Center for Microgravity Research. Six of the 12 are sponsored and partially funded by industry through NASA's Space Product Development Program at Marshall, which works with 17 NASA Commercial Space Centers across the United States.

"We are increasing the scope and sophistication of the science we are doing on the Space Station by building on what we have learned during the earlier expeditions," said Uri. "This month marks nine months of continuous research and an extraordinary increase in research capabilities aboard the Station."

*See **Science** on page 7*

Science

Continued from page 6

So far, nearly 500 hours of crew time have been dedicated to the research program on the Space Station, chalking up more than 50,000 hours of experiment run time. Many of the experiments are operated by controllers at the Payload Operations Center, which will be staffed this month with a fresh crew in charge of Expedition Four operations.

"The Marshall Center's experience working with three previous Space Station Expedition crews has helped prepare my team to implement NASA's ambitious research program for Expedition Four," said Tim Horvath, lead payload operations director, and head of the Expedition Four ground team at the Marshall Center.

"The diverse set of experiments slated for Expedition Four include intricate human-tended research, as well as automated and ground-controlled payloads. The flight controllers on our team interact with scientists around the world to choreograph the events required for successful research."

The three new Expedition Four crew members — astronauts Carl Walz and Dan Bursch and cosmonaut Yuri Onufrienko — will devote about 300 hours to research during their stay on the Space Station. The ground team at the Marshall Center will plan, operate and monitor science operations for five months, until the new Expedition Five ground team takes over in May 2002.

The writer, employed by ASRI, supports the Media Relations Department.

Marshall's contributions to Space Shuttle Flight STS-108 and Expedition Four

• New ground crew to support Expedition Four from the Payload Operations Center — the command post for Space Station science operations. March 2002 will mark the one-year anniversary of support from this control center, seven days a week, 24 hours a day.

• Second flight of the Raffaello Multi-Purpose Logistics Module (MPLM) — built by the Italian Space Agency and managed by the Marshall Flight Projects Directorate — packed with tons of equipment, including research payloads.

• First flight of the Lightweight Multi-Purpose Experiment Support Structure Carrier (LMC), a new carrier that will make it easier to fly small experiments and get spare parts to the Station by using the very back of the Shuttle bay. The LMC was built and tested by the Boeing Company and engineers in Marshall's Flight Projects Directorate.

• Of the 26 Expedition Four payloads, 12 experiment payloads are managed by Marshall — the Lead Center for Microgravity Research. Six experiments are sponsored by NASA's Microgravity Research Program and study crystal growth, cell formation and other fundamental science questions. Six experiments are sponsored by NASA's Space Product Development Program that helps industry do business in space through 17 Commercial Space Centers located across America. These experiments include experiments focusing on bone loss treatments, plant growth, pharmaceutical production and petroleum refining.

Photo by Terry Leibold, NASA/Marshall Space Flight Center

Marshall marks American Education Week

Following a ceremony to open American Education Week, Marshall's Educator Resource Center at the U.S. Space & Rocket Center hosted an open house Nov. 14 to recognize American Education Week and honor Marshall team members who volunteer time to speak at education outreach activities. From left, Jim Pruitt, manager of Marshall's Education Programs Department; speaker Dr. Ethel Hall, vice president, Alabama Board of Education; Alicia Beam, an education programs specialist at Marshall; Dr. Mary Jane Caylor, member of the Alabama Board of Education; and Alfred Hall, husband of the speaker, discuss the event.

Industrial ergonomics

Knowing what to look for can help eliminate workplace injuries

You've probably heard the term "ergonomics" before. It's a relatively new field of study concerning how a person interacts with the working environment.

Ergonomics is a broad field, but the basic goal of an ergonomics program is injury prevention. This is accomplished by fitting the job to the worker instead of fitting the worker to the job.

Injuries arising from poor ergonomic conditions typically involve the bones, muscles, joints, tendons and nerves. Symptoms of these injuries are:

- Painful joints
- Pain, tingling or numbness in hands or feet
- Pain in wrists, shoulders, forearms, knees, etc.
- Back or neck pain
- Fingers or toes turning white
- Shooting or stabbing pains in arms or legs
- Swelling or inflammation
- Stiffness
- Weakness or clumsiness in hands
- Burning sensations
- Heaviness

These symptoms could also be the result of other medical conditions, so check with your doctor if you are concerned about any of these.

The good news is that ergonomic problems can usually be solved by simple, common-sense solutions. Improving your position while you work can prevent injuries that are caused by awkward posture. Any time you must twist your body, work overhead, kneel, bend over or squat you increase your risk of an injury. Repetition of these movements further increases your chance of injury.

Occasional awkward posture is probably no cause for alarm, but if you find yourself repeatedly bending, stretching and twisting, making some simple adjustments to the work environment can solve the problem of awkward posture.

Your workstation may need some adjustment, or the materials you use in performing your job may need to be rearranged. Store frequently used materials in front of you at waist height. Heavier objects should not be placed overhead. Place them at a level so they are easier to lift. Use of mechanical lifting equipment may also be possible.

Repetitive motion tasks can also lead to injuries. If your job requires you to make the same motions repeatedly, consider learning the correct posture for the job.

Check with your safety department for ideas on reducing injury from repetitive motion tasks. You may find that there is equipment available to use that will reduce your chance of injury. However, don't depend only on a back or wrist brace to protect you. Your best prevention is to maintain the correct position for the task, take recommended breaks, and do any recommended exercises to help prevent injury.

Some other causes of ergonomic injuries are:

- Sustained muscle exertion, which reduces blood flow to the muscles and causes muscle strains and sprains
- Contact stresses, which are injuries that occur due to repeated contact with a hard surface
- Extreme temperature, which can reduce sensitivity to pain and reduce blood flow
- Vibration, which can reduce blood flow and sensory response

In some of these cases it may not be possible to make a simple adjustment to overcome the problem. Engineered controls may be the best solution, so check with your safety department.

There are factors within your control, however. Sometimes you may be tempted to use your body itself as a tool. Have you ever used your hand or foot to kick or pound an object? Have you ever taken a shortcut and neglected to use the right piece of equipment to do the job? You may have substituted your hands for a vise, your knee for a ram or your back for a hand truck. All of these situations put you at risk of an injury. That shortcut could cost you a lot of time and unnecessary suffering. Think twice before you use your body as a tool. It will thank you for it.

Giving thanks even when life seems dismal

Before you start grumbling that you have little to be thankful for this month, consider what the pilgrims who broke bread together that first Thanksgiving in 1621 faced:

They had uprooted themselves from their lives and sailed for the New World. The journey was so hazardous that guides advised travelers to "First, make thy will."

The trip was rough, to say the least. The Mayflower was actually blown off course, and instead of reaching Virginia, where there were Englishmen who'd settled there 13 years earlier, the pilgrims ended up in the wilds of Massachusetts.

When they finally found and settled on Plymouth, nearly half the company died from disease and starvation. "There died sometimes two or three of a day," Gov. William Bradford later recalled.

Though Native Americans showed the pilgrims how to plant corn, the settlers' first crops were dismal. Soon, supplies ran out and England refused to send more.

— adapted from the Arizona Republic

Fall co-op students share impressions with Center Director

The Marshall Center co-op students working at the Center this fall were treated to a luncheon with Marshall Center Director Art Stephenson Nov. 5.

Students provided Stephenson feedback on what they felt was going well at the Center and also asked questions.

The students will be returning to school for the spring semester in January. They will return to the Marshall Center next summer for another work term.

Photo by Dennis Olive, NASA/Marwshall Space Flight Center

From left are, first row: Center Director Art Stephenson; VS01/ Charles Hunt of Tennessee Tech; CD20/Chrissa Hall, Marshall's Co-op Program coordinator; PS01/Poppy Brothers, University of Alabama at Tuscaloosa; PS01/Tyler Cochran, UA-Tuscaloosa; TD51/ Cassie Kloberdanz, University of Iowa; TD30/Matthew Kalkstein, Penn State; ED26/Anish Momaya, Georgia Tech; AD40/LaCheryle Hatten, Alabama A&M University; SD46/Rachel Potter, University of Alabama in Huntsville; TD61/Matthew Moody, UA-Tuscaloosa; AD33/ Joseph Beauchamp, Kettering University; AD20/Lauren Shibakov, Tennessee Tech; FD01/Eileen Velez, University of Puerto Rico; CD01/ Charles Chen, UAH; CD20/Brandy Carter, Wallace State College; and FD41/Christi Meadows, Wallace State College
Back row: TD53/Kevin Miller, Purdue University; PS01/Koby South, New Mexico State University; RS20/Dustin Williams, Auburn University; QS10/Keegan Jackson, Auburn University; ED11/Johnnie Tangle, Florida A&M University; CD70/Brandon Boone, Utah State University; MP01/Jonathan Looser, UAH; and ED40/Andrew Young, East Tennessee State University.
Not pictured: FD21/Eli Screws, UAH; and SD71/Bryan Jennette, UAH.

'Energy tips'

Compact flourescent lamps can help save energy, money

This week's "Energy Tip" is something everyone can relate to.

By replacing incandescent light bulbs with compact fluorescent lamps, you can reduce your energy bill significantly.

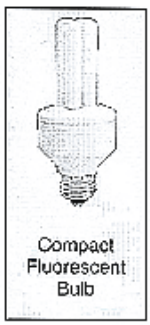
Compact fluorescent lamps save energy and last much longer than conventional incandescent lighting. The lamps can cut the energy cost by as much as 75 percent. A compact fluorescent lamp is easy to use because the screw type base is the same as an incandescent bulb.

For example, if you are going to consider replacing a 100 watt incandescent bulb with a 23 watt compact fluorescent bulb. Note the savings in the chart below:

The comparison translates to $5.60 annual savings for exchanging just one light bulb. How many compact fluorescent bulbs can you use?

If you have an energy tip that you would like to share with the "Marshall Star" readers, send it to: *cedreck.davis@msfc.nasa.gov* or, *juergen.haukohl@msfc.nasa.gov*

100 Watt Incandescent	Bulb Type	23 Watt Compact Fluorescent
$0.75	Purchase price/ bulb	$11.00
750 hours	Anticipated life	10,000 hours
4 hours	Number of hours "on" per day	4 hours
13 1/3	Number of bulbs for 10,000 hrs service	1
$10.00	Cost of bulbs for 10,000 hrs service	$11.00
1,690	Lumens	1,500
$51.10 $10.00 $61.10	Total cost of Power (5.11 cents/KWH) for 10,000 hrs service plus cost of bulbs	$11.75 $11.00 $22.75



NASA family combines musical talents to form trio

by Debra Valine

What does a NASA retiree do with her time? That's an easy question for Leo Larkin, an 18-year member of the Marshall family who retired in 1997.

After spending her last 12 years with NASA as a secretary to the External Tank chief engineer, Leo is now fully engaged in making music with husband, Bob, and son, Shane Adkins. The three teamed their lifelong interests in music to perform as the Classical-Country Connection.

Bob's close ties with Marshall were through the Apollo-Saturn program. In 1987, he retired from IBM, the prime contractor for the Instrument Unit — the "brain" of the Saturn 5 launch vehicle. Shane is a contractor with EG&G at Marshall.

Leo is a country musician and is recognized on the national level as a music evangelist in the United Methodist Church. She is also a champion harmonica player — the only woman competing in many bluegrass and old-time fiddler conventions.

"We play everything from Brahms to 'Orange Blossom Special,'" said Leo, who also plays guitar.

Adkins, a published songwriter, plays guitar and is the vocalist for the group. Bob is a classical violinist, and was concertmaster and assistant conductor of the Huntsville Symphony Orchestra for 15 years.

The trio performed Nov. 15 for a group of senior citizens from the Latham United Methodist Church. "We have played for them every year since 1996, usually for their Christmas dinner," Bob said.

Photo by Emmett Given, NASA/Marshall Space Flight Center

Marshall retiree Leo Larkin, center, husband Bob Larkin, left, and son, Shane Adkins, perform as the Classical-Country Connection.

The Classical-Country Connection also has a public performance scheduled for 1:30 p.m. Dec. 1 at the Huntsville Museum of Art's "Scenes of the Holidays." It's free and everyone is invited.

"We will be playing right after the Christmas parade in Huntsville," said Bob. "We played for the art museum's grand opening, too." They also play for weddings, receptions, corporate dinners and other special events. Bob and Leo recently spent a month in South Africa on a concert tour.

The three have become so popular they have released their first compact disc, "Heart's-A-Bustin' (with love)." It's available at Charlie's Grill in Bldg. 4203, area music stores, the Huntsville Museum of Art and the Huntsville Botanical Gardens Gift Shop.

"Ours is definitely a unique sound," said Leo. "My harmonica blends well with Bob's classical violin."

"I do not think there is anybody else doing what we do," said Bob. "Our sound is different from anything else you will hear."

The writer, employed by ASRI, is the Marshall Star editor.

Travel company offers NASA a discount Disney hotel package

Executive Tour and Travel Services Inc. is offering a discount hotel package to NASA Marshall employees, retirees, families and friends.

The package includes a four-day/three-night Disney/Epcot Area Hotel package for two adults and two children up to 12 years for $139 (room tax not included). Hotels included in this package are: Red Roof Inns, Wynfield Inn, Ramada Inn, Quality Inn, Holiday Inn, Summer Bay*, and Island One* (*Tour Required. Travel to Florida not included.)

To take advantage of this exclusive offer, a deposit of $65 plus $5 for shipping and handling must be made by Dec. 6. Although a 60-day advanced notice is required, travel dates are good through December 2002.

For more information, call Executive Tour and Travel Services Inc. at (800) 272-4707, Monday-Friday 8 a.m.-7 p.m. CST, or Saturday 8-11 a.m. CST. The NASA Exchange account reference is BG-11583-010. Flyers are available at the NASA Exchange Space Shop in Bldg. 4203.

Center Announcements

FEHB Open Season

The 2002 Federal Employees Health Benefits (FEHB) Open Season continues through Dec. 10. This is an opportunity to enroll, change plans or change from self only to family coverage. All changes during the open season will be effective Jan. 13, 2002. For more information you can access the OPM Web site at *www.opm.gov/insure/02/* or call Debbie Allen at 544-7536.

TSP Open Season

Thrift Savings Plan (TSP) Open Season continues through Jan. 31, 2002. This is a chance to start or change the amount of your contributions to your Thrift Savings Plan account. Changes will be effective Jan. 13, 2002. Employees are encouraged to submit changes via the Web at: *www.employeeexpress.gov.* For more information, call Ginger Martin at 544-5654, or Debbie Allen at 544-7536.

Holiday events

Upcoming Marshall Center December holiday events include the Tree Lighting Ceremony at 4 p.m. Dec. 3 at Bldg. 4200 and the Center Holiday Reception from 1-3 p.m. Dec. 5 at Bldg. 4752.

CI/CS training on Web

Continual Improvement and Customer Satisfaction (CI/CS) training modules are available on the Web at: *http://masterlist.msfc.nasa.gov/training_modules.*
All Marshall civil servants and contractors are asked to complete this training in preparation for the ISO 9000/2000 audit in late November.

Upcoming classes

Hazardous waste training

Training will be conducted from 9-10:30 a.m, Dec. 4 in Morris Auditorium for all personnel involved in the generation and accumulation of hazardous and controlled waste at the Marshall Center. Personnel who are currently designated as a point of contact or alternate for hazardous and/or controlled waste accumulation sites are required to attend this training annually. If you have any questions, call John Troy at 544-4787.

Resume building briefings

The following NASA STARS Process and Employee Resume Building Briefings will be in November and December. Briefings will be from 9:30-11:30 a.m. in Bldg. 4200, room G-13C on Nov. 27, Dec. 4, and Dec. 11. Each session will be filled on a first come first serve basis. Each session is limited to 25 participants.

Property management training

The National Property Management Association (NPMA) Rocket City Chapter's Fall 2001 Training has been postponed until Spring. Notices will be sent out at that time.

Cost Control classes

The fifth in a series of project planning and analysis classes, Space Project Cost Estimating and Analysis, will be from 8 a.m.-noon Nov. 28, in Bldg. 4200, room G-13E. Participants interested in attending should register via AdminSTAR.

Clubs and Meetings

MOO retirees meet

Due to the Thanksgiving holiday, the Management Operations Office (MOO) retirees' breakfast will be at 10 a.m. Nov. 29 at the Cracker Barrel restaurant in Madison. MOO retirees, former employees, present employees and friends are invited. For more information, call 539-0042 or 852-6396.

Miscellaneous

Girl Scout Cookies

Girl Scouts are taking orders for cookies through Dec. 2. Direct sales will be Jan 12-Feb. 16, 2002. If you don't know a Girl Scout, call 1-800-410-8338 to locate a troop near you. Proceeds from the cookie sale are used by troops for activities they have planned, and by the council to fund services and programs made available throughout the year to Girl Scouts in this area. Cookies are $3 per box.

NASA Exchange

Barber shop closed

S&H Barber Shop in Bldg. 4203 will be closed Nov. 22 and 23 for Thanksgiving. A full range of services is provided during regular hours 8 a.m.-4:45 p.m. Monday through Friday. For an appointment, call 881-7932.

Sam's NASA night out

NASA employees, retirees and contractors, and their families are invited to attend a special shop night exclusively for NASA from 7-9 p.m. Nov. 25. To take advantage of this offer, show your NASA badge at the store entrance. Refreshments, door prizes and goodie bags for children (ages 12 and under) will be offered. Sam's will also offer $10 gift cards with the purchase of a new primary or renewed primary on this night only. For more information, call Candy Bailey at 544-7565.

Annual nut sale

The NASA Exchange annual nut sale is under way. Sales will be from 9 a.m. -4 p.m., Monday-Friday (excluding holidays) in Bldg. 4752 on racquetball court No. 3 on a first-come/first-serve basis. For more information, call 544-7565.

Employee Ads

Miscellaneous

★ 200 Mhz Pentium II PC, 64mb RAM, 3Gb hard drive, $175, with 17" Micron monitor, $250. 882-1779
★ Christmas dishes; 23 Villeroy & Boch naïf dessert plates, $12 each. 882-6832
★ Basset crib, full size, maple frame, $80. 461-0482
★ Sears 12HP tractor, old, needs repairs, includes bulldozer blade and disc, $350; baseboard heaters. 837-6776
★ Camper shell for Chev. S-10, GMC, etc. pickup, Hi-rise fiberglass, top of the line, $475. (256) 922-1508
★ Sewing machine cabinet, solid oak with motorized machine lift, storage drawers, etc., $150 obo. 864-0465
★ Bedroom suite; bookcase headboard, chest-of-drawers, dresser, $350 obo. 881-9567
★ Lawn tractor with farm cart, 14HP, 42" cut, 1 yr. old, $750 obo. 859-2633
★ AKC registered Shelties (miniature collies), 2-males, 1 female, shots and de-wormed. 337-3415
★ Whirlpool gas dryer, white, $100. 325-0554
★ Antique Victorian wardrobe, single door w/mirror, one drawer, lots of carving, $300. 350-7461
★ Four sturdy ladder-back chairs, need refinishing, $150. 722-9989
★ Brunswick pool table, 2-yrs. old, paragon oak w/cherry finish, 1" slate, drop leather pockets, navy blue felt, $2,300 obo. 883-6415
★ Four tickets (together), BAMA/USM, Nov. 29, Birmingham Legion Field, upper deck, $21 each obo. 890-0755
★ Piano, $750; Dickens Christmas Village pieces; retired Longaberger baskets; Life magazines, 1938 through 1949. 534-4360
★ Ferret complete with cage, $150. 430-0380
★ Walnut lumber, approximately 200 board feet, varying lengths and widths, stored inside, $250. (256) 355-0302
★ Maytag washer, $50 obo. (256) 891-1073
★ Fish/terrarium/reptile/plant tank, 2' x 5', 10'" high, wood-framed glass sides & tile bottom, $20 obo. 828-6213
★ 5' x 8' tilting utility trailer, new deck, wiring, and lights, full size tires, $225. 882-0002
★ New burgundy lift chair with battery backup, $500. 883-8639
★ Playstation games: Metal Gear Solid with strategy guide, $15; Parasite Eve, $10. 883-5396

Vehicles

★ 1994 Honda Civic del Sol Vtech, black HT convertible w/rear spoiler, 5-speed, $5,999. (256) 498-3462
★ 1979 BMW 320i, 4-speed, 60K on rebuilt engine, $1,450. 883-6444
★ 2000 Toyota Tacoma, 4WD, 6-cylinder, ext. cab, 18K miles, $20,000 obo. 859-2633
★ 1997 Mercury Sable LS, leather trim black/gray, asking $7,000. 774-3147
★ 1998 Nissan Frontier, 4x4, 47K miles, new tires, alloy wheels. 931-438-7947/(256) 714-0535
★ 1994 Maxima GXE, champagne/beige interior, leather seats, AM/FM cassette, 94K miles, $6,200. 881-8674
★ 1999 Chevrolet S-10 LS, 32K miles, auto, factory CD, $9,000 obo. (256) 603-5585
★ 1988 Toyota Celica ST, blue, 5-speed, 232K miles, $975. 881-5684
★ 1969 Camaro, new SB 400, 4-speed Muncie, 3.73 rear end, needs paint & upholstery, $9,000 obo. 883-6415
★ 1986 Mazda 626, automatic, body good, $125. (931) 425-0749/533-2338
★ 1987 Jeep Wagoneer, 128k, auto 4WD, power windows & seats, leather trim, $2,875. 881-7561 (talk to the machine)
★ 1991 Explorer XLT, 69K miles, power package, one-owner, all records, $4,800 obo. 883-0164
★ 1997 Mercury Sable SE, leather trim seats, $6,800. 348-5042
★ 1979 Chevrolet long bed 4x4 pickup, 350 engine, $1,500. 883-7695
★ 1995 Chevrolet Silverado 1500, auto, short bed, extended cab, 108K miles. $8,950. (256) 753-2278

Wanted

★ Good used binoculars, reasonable, prefer pair not too big. 461-8369
★ Ping-pong table on wheels. 325-0554

MARSHALL STAR
Vol. 42/No. 12

Marshall Space Flight Center, Alabama 35812
(256) 544-0030
http://www1.msfc.nasa.gov

The Marshall Star is published every Thursday by the Internal Relations and Communications Department at the George C. Marshall Space Flight Center, National Aeronautics and Space Administration. Contributions should be submitted no later than Monday noon to the Marshall Internal Relations and Communications Department (CD40), Bldg. 4200, room 101. Submissions should be written legibly and include the originator's name. Send electronic mail submissions to: intercom@msfc.nasa.gov The Marshall Star does not publish commercial advertising of any kind.

Manager of Internal Relations and Communications — Steven Durham
Editor — Debra Valine

U.S. Government Printing Office 2002-733-060-20075

PRE-SORT STANDARD
Postage & Fees PAID
NASA
Permit No. G-27